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OU#3 ISA DISAPPROVAL
U.S. DOE FERNALD
OH6 890 008 976

12-21-90

USEPA/DOE-FMPC
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LETTER

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

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REPLY TO ATTENTION OF:

DEC 21 1990

5HR-12

Mr. Andrew P. Avel
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Re: OU#3 ISA Disapproval
U.S. DOE Fernald
OH6 890 008 976

Dear Mr. Avel:

On September 24, 1990, the United States Department of Energy (U.S. DOE) submitted a draft Initial Screening of Alternatives (ISA) report (a primary document) for Operable Unit (OU) #3 (Production area and other suspect areas). The United States Environmental Protection Agency (U.S. EPA) disapproved this draft report on October 24, 1990. Pursuant to Section XII of the 1990 Consent Agreement, U. S. DOE was required to submit a revised draft ISA report that addressed all the deficiencies identified by U.S. EPA.

On November 21, 1990, submitted a revised draft RI report to U.S. EPA. In accordance with Section XII.B of the Consent Agreement, U.S. EPA reviewed the revised ISA report. Based upon this review, U.S. EPA has determined that the report did not address all of the deficiencies identified in U.S. EPA's October 24, 1990, letter. Additionally, U.S. DOE failed to address the entire operable unit, as defined by the 1990 Consent Agreement. The ISA report was not developed in accordance with the requirements of the Consent Agreement, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and applicable U.S. EPA guidance and policy, as required by Section X.C of the 1990 Consent Agreement.

Section X.C.3 of the Consent Agreement defines the scope of OU#3 as the "production area and suspect areas outside the production area (including effluent line to Great Miami River". U.S. DOE has failed to include all waste and other drummed material, underground storage tanks, thorium, and buildings in the ISA report. U.S. DOE's failure to include the required elements in the remedial action for OU#3 has been discussed with U.S. DOE on

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numerous occasions including project management meetings and negotiations for Applicable Relevant and Appropriate Requirements (ARARs). Written notice of this deficiency was provided in U.S. EPA's disapproval of the initial draft ISA report on October 24, 1990 and a September 9, 1990, letter specifically on this issue. U.S. DOE has failed to correct this deficiency throughout the remedial effort. U.S. DOE has acknowledged an awareness of this problem and that their has been a failure to direct RI/FS contractor to do the proper work. The entire facility is on the National Priorities List (NPL) and nothing in the NCP, CERCLA, the 1990 Consent Agreement allows portions of the site to be excluded from the requirements of CERCLA for NPL sites. U.S. DOE's failure to submit an ISA report that complies with the NCP constitutes a violation of the express terms of Section X.C of the Consent Agreement.

Based on the above, U.S. EPA is disapproving the revised draft ISA report. Since this is the second disapproval of this document, this letter constitutes a notice of dispute in accordance with Section XII of the Consent Agreement. In addition to the deficiencies cited above, U.S. EPA has noted other deficiencies in the revised draft ISA report. These deficiencies are presented below:

1. As stated above, U.S. DOE failed to address all required elements of this Operable Unit in the ISA report.

2. The ISA report does not present an adequate screening of process options as required by Section 4.2.5 in the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01). Because process options were not adequately screened, alternatives were assembled from technology types and not process options. This resulted a limited range of alternatives that generally consist of excavation, unspecified treatment and disposal. A wider range of alternative could have been assembled if alternative were assembled considering a variety of non-treatment and treatment process options.

3. Although the ISA report implies that remediation goals will be set for the perched aquifer, it does not establish a point of compliance. A point of compliance must be established in the perched aquifer to monitor the effectiveness of remediation and demonstrate compliance with the established remediation goals.

4. U.S. DOE proposal to take the approach to complete treatability studies and other characterization activities after the record of decision (ROD) and during the preliminary design. This is an unacceptable proposal because much of the information proposed to be gathered in the preliminary remedial design should be considered in the detailed analysis.

5. U.S. DOE's proposal not to remediate the perched aquifer to remediation goals typically used for drinking water aquifers (i.e, 1E-04 to 1E-06 risk range) is unacceptable. While this remediation strategy is generally consistent with the proposed 264 Subpart S requirements (55 Fed Reg 30798), the remediation goals would not meet the target risk range. The National Contingency Plan (NCP) requires that groundwater be remediated throughout the contaminant plume (55 Fed Reg 8713). In addition, the RCRA Ground Water Monitoring Technical Enforcement Guidance Document (TEGD) (9959.1) defines the upper most aquifer to include all groundwater pathways of potential contaminant migration including perched water zones. Thus, the perched aquifer is to be remediated to 1E-04 to 1E-06 risk range.

6. Most alternatives carried forward to the detailed analysis of alternatives are a collection of remedial technologies. The ISA report should present a screening of technology process options, as suggested in Section 4.2.5 in the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01).

7. The response to U.S. EPA's comment No. 2 (October 24, 1990, disapproval of initial draft OU#3 ISA report) is not adequate. Alternatives could have been developed that involve different treatment strategies. Examples of alternatives which could have been developed are:

    - Excavate and conduct soil washing followed by no treatment prior to disposal.
    - Excavate and conduct soil washing followed by thermal treatment prior to disposal.
    - Excavate and conduct soil washing followed by stabilization prior to disposal.

    Selecting a treatment strategy in the remedial design process (as proposed in U.S. DOE's response) does not meet the requirement that the final remedy be objectively against the nine evaluation criteria. The process of selecting a treatment strategy in the remedial design phase must include an evaluation of the nine evaluation criteria.

8. The response to U.S. EPA comment No. 3 is not adequate. Information that is essential to the detailed analysis must be collected and reported in the detailed analysis of alternatives. For example, the engineering properties of soils must be determined before an on-site disposal facility can be evaluated; and treatability studies need to be

completed before evaluating treatment strategies. These are only two examples of the necessary information listed in U.S. EPA's original comment.

9. The response to U.S. EPA comment No. 7 is not adequate. U.S. EPA is establishing, as a guideline, that treatment as part of CERCLA remedies should generally achieve reductions of 90 to 99 percent in contaminant concentration or mobility of individual contaminants of concern (55 Fed Reg 8721). The results of these treatability studies should be considered and reported in the detailed analysis -- not simply incorporated into the feasibility study when available.

10. The response to U.S. EPA comment No. 9 is not adequate. The scope of Operable Unit 3 was determined in the 1990 Consent Agreement. As stated above, the scope of the ISA report document did not comply with the Consent Agreement and is deficient.

11. The response to U.S. EPA comment No. 16 is not adequate. The detailed analysis of alternatives cannot be completed without identifying the areas, volumes, and concentrations of contamination The response to U.S. EPA's comment states that a work plan is currently being prepared to address additional sampling in the area along the K-65 slurry lines. These results be must be incorporated into the RI/FS.

12. The response to OEPA comment No. 15 is not adequate. The results of the FMPC Outfall Pipeline Investigation are suspect because an inappropriate pressure testing procedure was used. Additional characterization may be necessary to determine if there are other areas of potential leakage. In addition, U.S. DOE has not conduct sampling in the areas identified as potentially contaminated.

13. The response to U.S. EPA comment No. 22 is not adequate. U.S. DOE must establish remediation goals for the perched aquifer. U.S. DOE has already stated in the report that this will be determined to be at a level at or below the FMPC action levels in the Great Miami Aquifer after migration from the perched aquifer has occurred. Remediation goals for the perched aquifer may be set at some concentration that does not result in a cumulative risk of less than 1E-04, but such goals must be justified and approved by U.S. EPA. Secondly, a point of compliance must be established in the perched aquifer to monitor the effectiveness of ground-water remediation and demonstrate compliance with established ground-water remediation goals. Finally, the identification of the point of compliance for drinking water remediation goals in the Great Miami Aquifer is too general. DOE should specify the exact boundary of

the waste unit. It should also be noted that monitoring wells located in Operable Unit 3 and screened in the Great Miami Aquifer have detected total uranium concentrations above the FMPC action levels.

14. The response to U.S. EPA comment No. 29 is not adequate. The results of the soil properties investigation and structural analysis should be completed and considered in the detailed analysis of alternatives. The results of these studies may affect the implementability and cost of the alternatives.

15. The response to U.S. EPA comment No. 30 is not adequate. The Best Management Practices (BMP) and Spill Prevention, Control and Countermeasures (SPCC) programs are required by the Consent Agreement to be incorporated into the site-wide RI/FS program.

16. The response to U.S. EPA comment No. 33 is not adequate. Treatment technologies can be combined to create separate alternatives. In addition, non-treatment prior to disposal could also be evaluated as a separate alternative.

17. The response to U.S. EPA comment No. 35 is not adequate. If special handling considerations affect any of the evaluation criteria, they should be considered in the detailed analysis, not in the final design of the remedial action.

18. The response to U.S. EPA comment No. 42 is not adequate. Although the wording was changed in the revised report to properly state that Table 7-2 shows 14 alternatives and associated technology types, alternatives are required to be assembled from process options before the detailed analysis of alternatives can begin.

19. The response to U.S. EPA comment No. 44 is not adequate. Although U.S. DOE states that the results of the treatability study will be considered in the detailed analysis of alternatives, U.S. EPA has not yet received a work plan for the treatability study.

The draft ISA report cannot become final until all of the deficiencies outlined above, have been adequately addressed by U.S. DOE. Accordingly, U.S. EPA hereby invokes dispute resolution as provided under Paragraph B of Section XIV of the 1990 Consent Agreement. U.S. EPA recommends that we commence informal dispute resolution on January 3, 1991, at 10:00 in Chicago.

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Please contact me at (312/FTS) 886-4436, if there are any questions regarding this matter.

Sincerely yours,

Catherine A. McCord

Catherine A. McCord
Remedial Project Manager

cc: Richard Shank, OEPA - CO
Graham Mitchell, OEPA - SWDO
Joe LaGrone, U.S. DOE - ORO
Leo Duffy, U.S. DOE - HDQ

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